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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,133

09/23/2003

James Mentz

31626

2864

7590

02/09/2005

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EXAMINER

HUNNINGS, TRAVIS R

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/669,133

Applicant(s)

MENTZ ET AL.

Examiner

Travis R Hunnings

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: element 200 in figure 4 and element 34 in figure 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The abstract of the disclosure is objected to because it is written in multiple paragraphs instead of a single paragraph. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Sacca et al. (Sacca; US Patent 6,373,377).

Regarding claim 1, Sacca discloses *Power Supply With Digital Data Coupling For Power-Line Networking* that has the following claimed subject matters:

The claimed communication device for receiving and transmitting communication signals is met by the network interface card (150) providing and receiving digital data (col2 38-58);

The claimed power supply connected between a power-line and the communication device for supplying power to the communication device is met by the power supply (140) being connected to a power line through a hot (H) terminal and a neutral (N) terminal (col4 3-4) and providing power to the network interface card (150; col3 59-61);

The claimed coupling means with the power supply for facilitating transmission of both line power and the communication signals to the communication device through the power supply is met by the power supply containing an analog front end (146) and circuitry block (128) that provide data signals to the network interface card (col3 4-15) and providing power to the network interface card (col3 59-61).

Regarding claim 2, Sacca discloses all of the claimed limitations. The claimed system wherein the coupling means facilitates transmission of both line power and the communication signals along a single connection is met by the device connecting to a power-line through a single connection containing a hot and a neutral terminal that allows both power and communication signals to pass along the connection (col1 52-67, col2 1-4 and figure 1).

Regarding claim 5, Sacca discloses all of the claimed limitations. The claimed system further comprising means for injecting the communication signals onto a ground-free low voltage direct-current path is met by the digital coupler transmitting data between the power supply and the network interface card digitally (col3 4-28). It is inherent that digital communication is accomplished using a direct-current path as opposed to an alternating-current path. The term 'ground-free' is interpreted to mean a single wire that has a voltage applied to it without the need for a secondary wire to provide a ground reference for the voltage.

Regarding claim 6, Sacca discloses all of the claimed limitations. The examiner takes official notice that the claimed system further comprising a redundant ground-free low voltage direct-current path is well known in the art and therefore would have been obvious to one of ordinary skill in the art because the power supplies in personal computer systems such as the one disclosed by Sacca commonly have multiple redundant direct-current paths in order to connect multiple device components to the same power supply. The term 'ground-free' is interpreted to mean a single wire that has a voltage applied to it without the need for a secondary wire to provide a ground reference for the voltage.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sacca in view of Coutinho (US Patent 5,777,769).

Regarding claim 3, Sacca discloses all of the claimed limitations except for the claimed system wherein the coupling means comprises a high pass filter for transmitting the communication signals and rejected power-line frequencies. Coutinho discloses

*Device And Method For Providing High Speed Data Transfer Through A Drop Line Of A Power Line Carrier Communication System* that teaches using a high pass filter to filter out the power line frequencies and deliver the communication signals to the terminal devices (abstract and col2 21-32). Replacing the AFE with a high pass filter would be a cheap alternative to provide the circuitry block with the communication signal that is on the power line. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sacca according to the teachings of Coutinho to use a high pass filter to transmit the communication signals while rejected the power line frequencies.

7. Claim4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sacca in view of Coutinho and further in view of Propp et al. (Propp; US Patent 4,815,106).

Regarding claim 4, Sacca and Coutinho disclose all of the claimed limitations except for the claimed system further comprising means providing transient protection for the communication device. Propp discloses *Power Line Communication Apparatus* that teaches using a surge protector in conjunction with the device in order to protect the electronics of the device from spikes in electric power (col5 18-19). Adding a surge protector to the device of Sacca and Coutinho would help to keep the device operating in the event of transient surges. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by

Sacca and Coutinho according to the teachings of Propp to include a surge protector to protect against transient signals.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sacca in view of Brown et al. (Brown; US Patent 4,514,594).

Regarding claim 7, Sacca discloses all of the claimed limitations except for the claimed system wherein the power supply comprises a transformer having a center tap to extract a low-voltage direct-current component without shorting the communication signals. Brown discloses *Power Line Carrier Telephone Extension System For Full Duplex Conferencing Between Telephones And Having Telephone Call Hold Capability* that teaches using a center tap transformer to provide DC power of 12 and 5 volts to the electronics of the phone system (col24 24-47). Including a center tap transformer in the power supply of Sacca would be an inexpensive addition to provide the needed DC power to the network interface card. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Sacca according to the teachings of Brown to use a center tap transformer to provide low voltage direct current to the electrical components of the system. The examiner also makes note that it is well known in the art to use a center-tap transformer to power a voltage rectifier in order to achieve a low voltage direct current power source.



**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abraham, *High Frequency Network Multiplexed...* US Patent 6,686,832

Sutterlin et al. *Data Communication Network Providing...* US Patent 5,148,144

Patel et al. *Appliance Adapted For Power Line...* US Patent 5,805,053

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis R Hunnings whose telephone number is (571) 272-3118. The examiner can normally be reached on 8:00 am - 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRH

  
DANIEL WU  
SUPERVISORY PATENT EXAMINER

02/06/05